

REMARKS

Applicant respectfully requests reconsideration. Claims 1-13, 15, 16, 18-34 and 38-40 were previously pending in this application. By this amendment, Applicant is canceling claims 25, 29 and 31 without prejudice or disclaimer. Claims 1, 18, 26, 30, 32, 33 and 38 have been amended. As a result, claims 1-13, 15, 16, 18-24, 26-28, 30, 32-34 and 38-40 are pending for examination with claims 1, 18 and 38 being independent claims. No new matter has been added.

Brief Overview of Some Embodiments

Before responding to the rejections, Applicants provide a brief summary of the Specification of the present application. This summary is not intended to characterize the claims or any of the terms used in the claims. This summary is not intended to dissuade the Examiner from reading the Specification and the references in their entireties, which the Examiner is encouraged to do.

Briefly, the Specification describes a peer-to-peer collaboration system in which copies of shared data are maintained on computers used by collaborating members. Changes to the shared data are communicated from a computer where a change is made to the other computers participating in a collaboration session [0081].

The Specification describes that the peer-to-peer nature of such a collaboration system allows computers used by some members to receive change messages in an order other than the order in which they were generated, and possibly in an order different than the order received by other computers. In this environment it is a challenge to maintain data consistency in all computers that are part of the peer-to-peer system.

The Specification enumerates several goals in maintaining consistency of the data in the telespace. These goals include causality preservation, intention preservation and convergence [0097]. The Specification describes that, in order to facilitate ordering of change messages, each change message is encoded with dependency information that enables a device receiving change messages out of order to ensure that no change is applied to the shared data before a prior change on which that change depends has been applied [102].

Though, dependency information does not completely address all of the goals. Convergence means that copies of the data maintained by all the peer units are the same after executing the changes [100]. It may be the case, for example, that two (or more) changes may depend on the same prior change, such that dependency information does not indicate how to order those two changes. This condition is called a dependency collision [110].

To enable convergence, despite the possibility of dependency collisions, the Specification describes that endpoint designations are assigned hierarchically. Here, an “endpoint” refers to a member using a particular computer. Each endpoint that may initiate a change is assigned a unique endpoint designation. The endpoint designations are assigned hierarchically such that, despite a lack of centralized administration, it is possible to order endpoints from the designations. To resolve a dependency collision, each peer computer applies changes in an order based on the hierarchy of endpoint designations. As a result, all peer units will consistently apply changes in the same order [111-114].

To achieve a hierarchy of endpoint designations, when a member invites another member to join, the inviting member assigns an endpoint designation to the invited member. The endpoint designation of the invited member incorporates the endpoint designation of the inviting member and a number that indicates the order, relative to other endpoints invited by the inviting member, in which the invited member was invited to join the collaboration session. In this way, each endpoint designation will be unique and can be ordered relative to all others [111-112].

Rejections – 35 U.S.C. §102

Claims 1-3 and 18-20, including independent claims 1 and 18 are rejection as anticipated by Sasaki (U.S. Patent 5,667,440). Applicants respectfully disagree with the rejection to the extent it is maintained over the claims as amended.

Independent Claim 1

Claim 1 recites: “at least two of the plurality of computers in the peer-to-peer collaboration system, the at least two of the plurality of computers used by inviting members to:

independently assign unique designations.” The claim further recites: “order received data change messages based on endpoint designations in the received data change messages.” Applicants respectfully submit that Sasaki does not disclose a system that meets either of these limitations. Accordingly, the rejection must be withdrawn.

Sasaki does not relate to a peer-to-peer collaboration system in which inviting members independently assigned unique designations. Rather, Sasaki describes a game playing system in which game equipment is controlled by a central component, which the reference is understood to describe as either “a center unit” (col. 1, line 17) or a “server” (col. 8, line 28). The Office Action cites passages of Sasaki that mention “distribution numbers” that are assigned to the individual terminal devices used for playing a game. However, as is clear from the reference as a whole, these distribution numbers are assigned by a single device, the server. Therefore, Sasaki does not meet at least the limitation of claim 1 that recites “...at least two of the plurality of computers in the peer-to-peer collaboration system the at least two of the plurality of computers used by inviting members to: independently assigned unique designations.”

Further, as is explained in the passage from column 7, line 50 through column 9, line 8 and the illustration in FIG. 7, the “distribution numbers” in Sasaki are used to allocate time slots in which each of the game devices communicates. Accordingly, the distribution numbers are not a type of information included in messages sent by the game devices. It follows further that the distribution numbers cannot be used to order received messages. Accordingly, Sasaki does not meet at least the limitation of claim 1 that recites “order received data change messages based on end point designations in the received data change messages.” For either of the foregoing reasons, the rejection of claim 1 must be withdrawn.

Independent Claim 18

Claim 18 recites: “the means for assigning comprising means operable by each of the inviting members for assigning a unique designation to each new telespace member that an inviting endpoint invites into the telespace.” The claim also recites: “means for resolving dependency collisions between a plurality of data change messages, the dependency collisions

being resolved based on respective unique designations in each of the plurality of data change messages, the unique designations being assigned by the means for assigning.” For reasons that should be apparent from the discussion of Sasaki, above, Sasaki does not disclose an apparatus that meets either of these limitations. Accordingly, the rejection must be withdrawn.

Rejections – 35 U.S.C. §103

Claims 38-40 are rejected under 35 U.S.C. §103 based on Gudjonsson (U.S. Patent 6,564,261) and Hertzog (U.S. Patent Publication 2003/0069874). Applicants respectfully traverse the rejection.

Claim 38 recites: “receiving from a computer of the inviting member of the peer-to-peer collaboration system an invited member endpoint designation for the invited member, the invited member endpoint designation having a hierarchical representation with a first portion identifying the inviting member endpoint designation and a second portion identifying when the invited member was invited to join the shared telespace relative to when the inviting member invited other members to join the shared telespace.” The claims also recites: “transmitting change messages indicating changes to the shared telespace, each change message comprising the invited member endpoint designation.” Applicants respectfully submit that the references, even if combined, do not meet either of these limitations. Accordingly, the rejection must be withdrawn.

Neither Gudjonsson nor Hertzog describes a peer-to-peer collaboration system that assigns and uses end point designations as recited independent claim 38. To the contrary, Gudjonsson relates to a communication system that allows anonymous communication between users over various networks (see, for example, Title). To implement such a system, Gudjonsson describes multiple different clusters of servers. Users register with a server cluster and are assigned a unique identification by that server cluster (see, for example, Abstract). The Office Action cites to column 3, lines 7-10 and FIG. 3 of Gudjonsson. However, to the extent these passages mention “inviting” the term is used in conjunction with inviting a member into a chat

session. No end point designation is assigned as part of the inviting described in Gudjonsson. To the contrary, it seems that, to the extent end point designations are involved, the end point designations are previously assigned by the cluster of servers with which each end point previously registered.

Hertzog does not cure the deficiencies of Gudjonsson. The features of Hertzog cited in the Office Action also do not relate to receiving from a computer of an inviting member of a peer-to-peer collaboration system an invited member endpoint designation. The Office Action cites to paragraph [0102]. Applicants disagree for at least two reasons.

As an initial matter, Applicants respectfully object to the combination of Gudjonsson and Hertzog in the manner asserted in the Office Action. Gudjonsson relates to a system for allowing anonymous communications. In contrast, Hertzog relates to a system that manages a database of personal contact information (see, for example, Abstract). The cited passage of Hertzog relates to the structure of information in a database of personal contact information. There is no reason that one of skill in the art would have adapted a system of anonymous communication based on data structures used to store personal contact information. Accordingly, the rejection based on the combination of Gudjonsson and Hertzog must be withdrawn.

Second, even if the references could be combined, the combination does not meet all limitations of the claims. The features of Hertzog described in [0102] relate to information stored in a personal information management system as part of recruiting non-users to register with the system. In this context, the reference mentions invitations sent to non-users. However, the features cited in the Office Action as being “an invited member endpoint designation for the invited member” refer to information stored in a database. There is no indication that such data is used as a designation for the invited non-user. There is also no indication that such designations are transmitted in change messages.

hierarchical representation with a first portion identifying the inviting member endpoint designation and a second portion identifying when the invited member was invited to join the shared telepace relative to when the inviting member invited other members to join the shared telepace,” or “transmitting change messages indicating changes to the shared telepace, each change message comprising the invited member endpoint designation.”

Because neither Gudjonsson nor Hertzog teaches at least these limitations of claim 38, even if the references were combined, the combination would not meet these limitations. For this additional reason, the rejection of claim 38 must be withdrawn.

General Comments on Dependent Claims

Each of the dependent claims depends from a base claim that is believed to be in condition for allowance, and Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. Applicants do not, however, necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

CONCLUSION

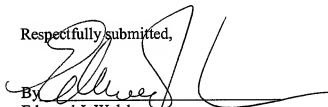
In view of the above amendment, applicant believes the pending application is in condition for allowance. A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. M1103.70271US02 from which the undersigned is authorized to draw.

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Respectfully submitted,



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